

107500914

Amendments to the Claims:

DT04 Rec'd PCT/PTO 08 JUL 2004

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A blade supporting apparatus in a wiper apparatus in which a wiper blade mounted to a leading end portion of a wiper arm wipes a window surface in correspondence to a normal and reverse rotation of a wiper shaft integrally mounted to a base end portion of the wiper arm, ~~wherein a middle portion of the wiper blade is pivotably supported by the leading end portion of the wiper arm via a pivot substantially orthogonal to an arm length direction so as to freely oscillate and~~ oscillate, the blade supporting apparatus comprising a supporting member provided in the wiper arm supports to movably support, toward and away from the window surface, the portion of the wiper blade nearer to the wiper shaft side than the middle portion of the wiper blade in a window surface direction, said blade, the supporting member comprising having a supporting concave portion formed in the supporting member so as to receive and support the wiper blade and a plurality of ribs elongated in extending toward the window surface direction formed on an inner surface of the supporting concave portion so as to be in linear contact with the wiper blade.

2. (Currently Amended) ~~A The blade supporting apparatus in a wiper apparatus according to claim 1, wherein an upper piece portion constituting~~ providing the supporting concave portion in of the supporting member is fixed to the wiper arm.

3. (Currently Amended) ~~A The blade supporting apparatus in a wiper apparatus according to claim 1 or 2, claim 1, wherein the wiper arm is structured such that a base end portion of an arm piece in piece, to which the wiper blade is mounted to at a leading end portion thereof thereof, is fixed to~~ fixedly fitted into a leading end portion of an arm shank formed in a substantially C shape in a cross section in such a manner as to be inward fitted, section, an open side of which faces the window surface, and the supporting member is fixed

to the base end portion of the arm piece via a bolt screwed from an inside of the supporting concave portion, and is fixed to the leading end portion of the arm shank together with the arm piece.

4. (Currently Amended) ~~A-The~~ blade supporting apparatus ~~in a wiper apparatus~~ according to claim 3, wherein positioning means for fitting the arm piece in a positioning manner is formed in an assembling portion of the supporting member with the arm piece.

5. (Currently Amended) ~~A-The~~ blade supporting apparatus ~~in a wiper apparatus~~ according to claim 4, wherein the positioning means ~~is constituted by~~ comprises a pair of protruding pieces ~~faced to an~~ extending in the arm length direction of the wiper arm and a protruding piece orthogonal to the arm length ~~direction and against which direction,~~ a base end edge of the arm piece ~~is struck, contacting the orthogonal protruding piece for~~ positioning, and ~~is used also~~ acts as anti-vibration means for preventing ~~a stabilizer the~~ supporting member from vibrating with respect to the arm piece.

6. (Currently Amended) ~~A-The~~ blade supporting apparatus ~~in a wiper apparatus~~ according to ~~any one of claims 1 to 5,~~ claim 1, wherein the supporting member supports a blade lever constituting the wiper blade, and a support receiving body ~~inward insertedly~~ fitted to the supporting concave portion of the supporting member is provided in a supporting portion of the blade lever in a come-off preventing manner.

7. (Currently Amended) ~~A-The~~ blade supporting apparatus in a wiper apparatus according to claim 6, wherein the supporting portion of the blade lever ~~by the supporting member~~ is disposed near a pivot portion pivoting a first lever connected to the wiper arm and a second lever, and at least one rib in the supporting concave portion of the supporting member opposes to a pin fastened to the pivot portion.

8. (Currently Amended) ~~A-The~~ blade supporting apparatus ~~in a wiper apparatus~~ according to ~~claim 6 or 7,~~ claim 7, wherein a through hole allowing both end portions of a pin

between the first lever and the second lever to protrude and ~~expose~~ be exposed to the outside is opened in the support receiving body.

9. (Currently Amended) ~~A~~ The blade supporting apparatus ~~in a wiper apparatus~~ according to ~~any one of claims 6 to 8,~~ claim 8, wherein the support receiving body is open ~~on~~ toward the window surface ~~side to be and is~~ formed in a substantially C cross sectional shape, and the support receiving body is provided with a fitting and attaching portion fitting to the pivot portion pivoting the first lever and the second lever, and an extension portion extended from the fitting and attaching portion ~~so as to be interfered with the second lever and~~ regulating-regulate a movement of the second lever in a wiping direction.

10. (Currently Amended) ~~A~~ The blade supporting apparatus in a wiper apparatus according to ~~any one of claims 6 to 9,~~ claim 9, wherein the fitting and attaching portion of the support receiving body is ~~formed~~ thinner than the extension portion, and the fitting to the first lever is achieved by an elastic deformation of the fitting and attaching portion.

11. (Currently Amended) ~~A~~ The blade supporting apparatus in a wiper apparatus according to ~~any one of claims 6 to 10,~~ claim 10, wherein a first step portion engaging with the first lever ~~in at~~ the window surface ~~direction so as~~ side to achieve a come-off prevention and a second step portion engaging with the first lever in the lever length direction ~~so as to~~ achieve a come-off prevention in the lever length direction are formed in the fitting and attaching portion of the support receiving body.

12. (Currently Amended) ~~A~~ The blade supporting apparatus ~~in a wiper apparatus~~ according to claim 11, wherein the second step portion is formed so as to be positioned at both end portions of the first step portion in the lever length direction.

13. (Currently Amended) ~~A~~ The blade supporting apparatus in a wiper apparatus according to ~~claim 11 or 12,~~ claim 12, wherein at least one second step portion is continuously formed ~~in with~~ the first step portion.

14. (New) The blade supporting apparatus according to claim 2, wherein the wiper arm is structured such that a base end portion of an arm piece, to which the wiper blade is mounted at a leading end portion thereof, is fixedly fitted into a leading end portion of an arm shank formed in a substantially C shape in a cross section, an open side of which faces the window surface, and the supporting member is fixed to the base end portion of the arm piece via a bolt screwed from an inside of the supporting concave portion, and is fixed to the leading end portion of the arm shank together with the arm piece.

15. (New) A blade supporting mechanism for a wiper apparatus for a window surface, the wiper apparatus having a wiper arm connected at one end to an oscillation shaft and having a wiper blade connected at the other end, the wiper blade having a wiping blade mounted to a lever arm assembly having a plurality of levers including at least a main lever and a secondary lever pivotally mounted to each end of the main lever, the main lever pivotally mounted to the other end of the arm shaft, the arm shaft made up of at least an arm piece at the other end and an arm portion connected to the oscillation shaft, the blade supporting mechanism comprising:

a support receiving body mounted at a pivotal connection of the main lever to a secondary lever closest to the oscillation shaft; and

a stabilizer mounted in the arm portion to oppose and receive the support receiving body, wherein a plurality of ribs are formed on a one of inner side surfaces of the stabilizer and outer side surfaces of the support receiving body, the ribs extending in a direction toward and away from the window surface.

16. (New) The blade supporting mechanism according to claim 15, wherein the support receiving body has an upside down U-shaped cross-section, and comprises a fitting and attaching portion and an extension portion.

17. (New) The blade supporting mechanism according to claim 16, wherein the main lever has an expanded end portion at the pivotal mount with the second lever and the fitting and attaching portion has a complementary fitting portion within inner sides to receive and retain the expanded end portion when the support receiving body is mounted to the pivotal mount of the main lever and the secondary lever at an end closest to the oscillation shaft.

18. (New) The blade supporting mechanism according to claim 17, wherein the stabilizer has an upside down U-shaped cross section, the closed base mounted in the arm portion and having a channel therein which is closed by the arm portion, an end of the arm shaft received in the channel and fixed therein.

19. (New) The blade supporting mechanism according to claim 18, wherein the closed end of the support receiving body is received in an open end of the stabilizer in a manner such that inner side surfaces of the stabilizer are in slideable contact with outer side surfaces of the support receiving body.

20. (New) The blade supporting mechanism according to claim 15, wherein the plurality of ribs are formed on the inner side surfaces of the stabilizer and one rib opposes the pivotal connection of the main lever and the secondary lever closest to the oscillation shaft.